Issuance Date: April 19th. 2006
Effective Date: May 1st, 2006
Expiration Date: May 1st, 2011
Modification Date: May 25, 2006

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
WASTE DISCHARGE PERMIT No. WA-000076-1

State of Washington
DEPARTMENT OF ECOLOGY
Olympia, Washington 98504-8711

In compliance with the provisions of
The State of Washington Water Pollution Control Law
Chapter 90.48 Revised Code of Washington
and
The Federal Water Pollution Control Act
(The Clean Water Act)
Title 33 United States Code, Section 1251 et seq.

Tesoro Refining and Marketing Company

PO Box 700

Anacortes, Washington 98221

Facility Location:

West March Point Road
Anacortes, Washington

Receiving Water:

Fidalgo Bay

Water Body ID No.:

WA-03-0020

Industry Type:
Petroleum Refinery

Discharge Location:

001: Lat 48°30' 30" N, Lon 122°34' 00" W
002: Lat 48°29' 30" N, Lon 122°34' 30" W
003: Lat 48°30' 00" N, Lon 122°33' 41" W
004: Lat 48°29' 25" N, Lon 122°34' 30" W

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is authorized to discharge in accordance with
the special and general conditions which follow.

Merley F. McCall, Acting Section Manager
Industrial Section
Washington State Department of Ecology

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SUMMARY OF PERMIT REPORT SUBMITTALS

Refer to the Special and General Conditions of this permit for additional submittal requirements.

Permit Section	Activity/Report	Activity/Report Frequency	Report Submittal / Activity Date
S1.D.	Storm water / Emergency Overflow Discharge Notification and Monitoring (Outfall 002, Outfall 003, Outfall 004)	As necessary	Verbal notification prior to or within 24 hours of the discharge event / send written report with the subsequent DMR
S3.A.	Discharge Monitoring Report (DMR)	Monthly	15th day following each month
S3.D.	Additional Monitoring by the Permittee	as necessary	with the discharge monitoring report
S3.E.	Noncompliance Notification - Verbal Report	as necessary	Within 24 hrs of discovery
S3.E.	Noncompliance Notification – Written Report	as necessary	Within 5 days for bypasses or upsets, otherwise with subsequent DMR
S3.F.	Other Noncompliance Reporting.	as necessary	With subsequent DMR
S3.G.	Reporting - Shellfish Protection – unauthorized sanitary discharges	As necessary	Immediate verbal notification to Ecology and the Health department
S4.A.	Treatment System Operating Plan	1/permit cycle	November 2, 2010
S5.A.	Engineering Report – analysis update	Once	November 2, 2010
S5.B.	Flow Measurement engineering report	1/permit cycle	January 31st, 2007
S7	Acute Toxicity Report	1/permit cycle	November 2, 2010
S8	Chronic Toxicity Report	1/permit cycle	November 2, 2010
S9.	Outfall Evaluation Report	1/permit cycle	November 2, 2010
S10.A.	Pollution Prevention Plan Update	Once	May 1st, 2007
S10.C.	Pollution Prevention Plan – Storm water Inspections	2/year (wet and dry season)	Reported with Pollution Prevention Plan progress report beginning May 1st, 2009
S10.D.	Pollution Prevention Plan Biennial Progress Report	Every 2 years	Beginning May 1st, 2009
S11	Standard Construction	1/permit cycle	September 1st, 2006

Permit Section	Activity/Report	Activity/Report Frequency	Report Submittal / Activity Date
	Stormwater Pollution Prevention Plan (SWPP) for projects from 1 – 5 acres		
S11	Construction Stormwater projects from 1 – 5 acres project details	As necessary	At least 90 days prior to start of construction
S11	Construction Stormwater projects greater than 5 acres project details	As necessary	At least 90 days prior to start of construction
S12	Priority Pollutant Testing Data Report Submittal	annually	November 1st, 2006 and every 12 months thereafter.
S14	Mercury Prevention Plan	Once	May 1st, 2007
S15	Dioxin/AKART Report	Once	May 1st, 2009
G17.	Application for permit renewal	1/permit cycle	November 2, 2010

SPECIAL CONDITIONS

S1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

A. Process Wastewater Limitations and Monitoring Requirements (Outfall 001)

All discharges and activities authorized by this permit shall be consistent with the terms and conditions of this permit.

The discharge of any of the following pollutants more frequently than, or at a level in excess of, that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit.

Beginning on the effective date of this permit and lasting through the expiration date, the Permittee is authorized to discharge treated effluent at the permitted location subject to complying with the following limitations:

Base Effluent Limitations and Monitoring Requirements for Outfall #001

Parameter	Units	Limits		Monitoring Frequency	Sample Type
		Average Monthly [a]	Maximum Daily [b]	Samples/ days	
Biochemical Oxygen Demand (5-day)	lbs/day	710	1280	2/7	24 hr composite (comp)
Chemical Oxygen Demand	lbs/day	4900	9500	7/7	24 hr comp.
Total Suspended Solids	lbs/day	560	890	5/7	24 hr comp.
Oil and Grease	lbs/day	210	380	5/7 [c, d]	Grab
Oil and Grease	mg/l	The concentration of oil and grease in the discharge shall at no time exceed 15 mg/l, and shall not exceed 10 mg/l more than three days per month.		5/7 [c, d]	Grab
Phenolic Compounds	lbs/day	4.6	9.5	1/7 [c]	24 hr comp.
Mercury	ug/l	1.8	3.6	1/30 [c]	Grab
Ammonia as N	lbs/day	450	1010	1/7 [c]	24 hr comp.
Sulfide	lbs/day	3.8	8.4	1/30 [c]	Grab
Hexavalent Chromium	mg/l	--	0.050	Semi-annual	24 hr comp.
Fecal Coliforms	Organisms/ 100mls	200/100 mls average monthly limit, 400/100 mls maximum daily		1/7 [c]	Grab

Parameter	Units	Limits		Monitoring Frequency	Sample Type
		Average Monthly [a]	Maximum Daily [b]	Samples/ days	
Temperature	°C	There is no limitation for this parameter. Information collected shall be reported in the monthly DMR.		Daily grab or continuous recording	
Effluent Flow	MGD	There is no limitation for this parameter. The average monthly and maximum daily flow shall be reported in the monthly DMR.		Continuous recording	
Feedstock Rate barrels (bbls)	bbls per day	There is no limitation for this parameter. The average monthly shall be reported in the monthly DMR.		Daily	
pH	**pH shall be maintained within the range of 6.0 to 9.0.** Excursions between 5.0 and 6.0, or 9.0 and 10.0 shall not be considered violations provided no single excursion exceeds 60 minutes in length and total excursions do not exceed 7 hours and 30 minutes per month. Any excursions below 5.0 and above 10.0 are violations. The instantaneous maximum and minimum pH shall be reported monthly. In the event of a failure of continuous monitoring equipment hourly grab samples shall meet the frequency requirements.			Continuous recording	
Total Residual Chlorine	**0.1 mg/l average monthly; 0.26 mg/l maximum daily** Total residual chlorine monitoring is required to be monitored on a daily basis during those times when the effluent is being actively chlorinated. Monitoring will also be required for two additional days following cessation of chlorination.			Grab	
Acute Toxicity Monitoring: See Permit Condition S7					
Chronic Toxicity Monitoring: See Permit Condition S8					
Priority Pollutant Testing: See Permit Condition S12.					
Dioxin Study And AKART Engineering Report: See Permit Condition S15.					

[a] The average monthly effluent limitation is defined as the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month. Additional allocation may be permitted for storm water runoff and ballast water according to Permit Condition S1.C.

[b] The maximum daily effluent limitation is defined as the highest allowable daily discharge. The daily discharge means the discharge of a pollutant measured during a calendar day. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For other units of measurement, the daily discharge is the average measurement of the pollutant over the day. Additional allocation may be permitted for storm water runoff and ballast water according to Permit Condition S1.C.

[c] The monitoring frequencies for these parameters have been reduced based on the excellent performance of the facility. If performance levels deteriorate during the term of the permit, the monitoring frequencies shall increase to standard modes (O&G 7/7,Ammonia 7/7, Phenols 7/7, Sulfides 2/7, Fecal Coliforms 2/7, TSS 7/7). Ecology will notify the facility by letter to increase monitoring upon Ecology's determination of deteriorating performance.

[d] One sample per week shall be collected on either Saturday or Sunday.

B. Mixing Zone Descriptions

The maximum boundaries of the mixing zones are defined as follows:

Chronic Mixing Zone

WAC 173-201A-100(4)(b)(i) specifies mixing zones shall not extend in any horizontal direction from the discharge ports for a distance greater than 200 feet plus the depth of water over the discharge ports as measured during mean lower low water (MLLW). Given a MLLW water depth of 25 feet (7.6 meters) for the Permittee's outfall, the horizontal distance therefore is 225 feet (68.6 meters). The mixing zone is a circle with radius of **225 feet (68.6 meters)** measured from the center of each discharge port. The mixing zone extends from the seabed to the top of the water surface. Chronic aquatic life criteria and human health criteria must be met at the edge of the chronic zone**.**

Acute Mixing Zone

WAC 173-201A-100(8)(b) specifies that in estuarine waters a zone where acute criteria may be exceeded shall not extend beyond 10% of the distance established for the maximum or chronic zone as measured independently from the discharge ports. The acute mixing zone is a circle with radius of **22.5 feet (6.9 meters)** measured from the center of each discharge port. The mixing zone extends from the seabed to the top of the water surface. Acute aquatic life criteria must be met at the edge of the acute zone.

Criteria	Available Dilution
Acute Aquatic Life Criteria	**20**
Chronic Aquatic Life Criteria	**91**
Human Health Criteria - Carcinogen	**93**
Human Health Criteria - Non-carcinogen	**91**

C. Ballast and Storm water Allocations (Outfall 001)

The permittee is authorized to discharge additional amounts of the following parameters based on storm water and ballast water flow through Outfall No. 001. Ballast water shall be determined by gauging the ballast water storage tanks. **The average dry weather flow is hereby established as 2.7 MGD. During the summer months of June through October the permittee shall only be allowed to claim the storm water allocation for the maximum daily value when it can be demonstrated that measurable rainfall has occurred at the refinery site during the previous 10 calendar days**. The storm water flow rate shall be determined as the difference between total measured effluent through Outfall No. 001 and the sum of ballast water plus the average dry weather flow rate**.** The maximum daily storm water allocation shall only be

granted on those storm water flow days when the base limits from S1. above are exceeded.

Parameter	Ballast Water Allocation: Outfall #001		Storm water Allocation: Outfall #001	
	Average Monthly	Maximum Daily	Average Monthly	Maximum Daily
	Pounds/Million Gallons/Day			
Biochemical Oxygen Demand (5-day)	210	400	220	400
Chemical Oxygen Demand	2000	3900	1500	3000
Total Suspended Solids	170	260	180	280
Oil and Grease	67	126	67	130
Phenolic Compounds	-----	-----	1.4	2.9

Storm water flow is equal to the amount of flow in excess of the established dry weather flow.
For the months of June through October, qualifying storm water flow days are only those days when measurable rainfall occurred at the refinery site during the previous 10 calendar days.

Average Monthly Stormwater Allocation (AMSWA) is defined as the sum of storm water flows from qualifying storm water flow days sampled divided by the number of qualifying days times the average monthly allocation for that parameter.

The **Total Average Monthly Limitation (T)** is the sum of the base average monthly limit (B) (listed in S1A) plus the Average Monthly Stormwater Allocation. **T = B + AMSWA** (An example calculation is shown in Appendix B.)

D. Stormwater, Emergency Overflow Monitoring (Outfall 002, Outfall 003, Outfall 004)

Beginning on the effective date of this permit, the Permittee is authorized to discharge storm water and/or treated wastewater from **Outfall 002, Outfall 003 or Outfall 004** during extreme rainfall events that exceed the capacity of the retention ponds. The storm water and/or treated waste water must be monitored for the parameters at the frequencies listed below. Unless an emergency situation occurs the Permittee is required to notify Ecology prior to the discharge event. In an emergency situation the Permittee is required to notify Ecology within **24 hours** of the onset of the discharge. **Outside of normal working hours, voice mail notification of the Industrial Section's responsible engineer, shall meet the requirement.**
The discharge shall not violate Chapter 173-201A WAC Water Quality Standards for Surface Waters of the State of Washington. The sum total of all discharges shall not violate limits specified in condition S1 of this permit.

Parameter	Outfall 002/004	Outfall 003	Monitoring Frequency	Sample Type [a, b]
				Grab

pH	x	x	Once/event	Composite
Total Suspended Solids	x	x	Once/event	Composite
Chemical Oxygen Demand	x	x	Once/event	Composite
Oil & Grease	x	x	Once/event	Grab
Lead	x		Once/event	Composite
Lead	x		Once/event	Composite
Zinc	x		Once/event	Grab
Volatile Organics[c]	x		Once/event	Composite
Phenols	x		Once/event	Composite
Flow measurement	x	x	Once/event	Engineering Estimate

[a] The storm water and/or waste water samples shall be collected from the outfall or an on-line stormdrain access point nearest the outfall terminus.

[b] Composite samples shall be collected with a composite sampler or as a combination of a minimum of one sample aliquot per hour of discharge for the entire discharge or at minimum for the first three hours of discharge.

[c] Volatile organics shall include benzene, naphthalene, 1,2,4-trimethlybenzene, isopropylbenzene, p-isopropylbenzene, ethylbenzene, propylbenzene, 1,3,5-trimethylbenzene, toluene, and total xylenes.

[d] BNA's shall include phenanthrene, fluorene, naphthalene, 2-methylnaphthalene, 2-methylphenol, benzyl alcohol, 2,4-dimethylphenol, and 4-methylphenol.

S2. MONITORING

The Permittee shall monitor in accordance with the following conditions.

A. Sampling and Analytical Procedures

Samples and measurements taken to meet the requirements of this permit shall be representative of the volume and nature of the monitored parameters, including representative sampling of any unusual discharge or discharge condition, including bypasses, upsets, and maintenance-related conditions affecting effluent quality.

Sampling and analytical methods used to meet the monitoring requirements specified in this permit shall conform to the latest revision of the *Guidelines Establishing Test Procedures for the Analysis of Pollutants* contained in 40 CFR Part 136 or to the latest revision of *Standard Methods for the Examination of Water and Wastewater* (APHA), unless otherwise specified in this permit or approved in writing by the Department of Ecology (Department).

The daily composite sample shall be sufficient to allow for the Permittee's analysis, and an additional 2 gallons (minimum) shall be retained for 24 hours. The composite sample shall be kept refrigerated at 4^{o} Centigrade in the dark during collection and storage.

B. Flow Measurement

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the quantity of monitored flows. The devices shall be installed, calibrated, and maintained to ensure that the accuracy of the measurements are consistent with the accepted industry standard for that type of device. Frequency of calibration shall be in conformance with manufacturer's recommendations and at a minimum frequency of at least one calibration per year. Calibration records shall be maintained for at least three years.

C. Laboratory Accreditation

All monitoring data required by the Department shall be prepared by a laboratory registered or accredited under the provisions of, *Accreditation of Environmental Laboratories*, Chapter 173-50 WAC. Flow, temperature, settleable solids, conductivity, pH, turbidity, and internal process control parameters are exempt from this requirement. Conductivity and pH shall be accredited if the laboratory must otherwise be registered or accredited. The Department exempts crops, soils, and hazardous waste data from this requirement pending accreditation of laboratories for analysis of these media.

S3. REPORTING AND RECORDKEEPING REQUIREMENTS

The Permittee shall monitor and report in accordance with the following conditions. The falsification of information submitted to the Department shall constitute a violation of the terms and conditions of this permit.

A. Reporting

The first monitoring period begins on the effective date of the permit. Monitoring results shall be submitted monthly. Monitoring data obtained during each monitoring period shall be summarized, reported, and submitted on a Discharge Monitoring Report (DMR) form provided, or otherwise approved, by the Department. DMR forms shall be **postmarked or received no later than the 15th day of the month** following the completed monitoring period, unless otherwise specified in this permit. **In addition, a summary sheet, listing daily results for the parameters tabulated in Special**

Condition S1, including MDLs, and QLs (when applicable), shall be submitted to the Department. Priority pollutant analysis data shall be submitted no later than sixty (60) days following the monitoring period. Unless otherwise specified, all toxicity test data shall be submitted within sixty (60) days after the sample date. The report(s) shall be sent to the Department of Ecology, Industrial Section, P. O. Box 47706, Olympia, Washington 98504-7706.

All laboratory reports providing data for organic and metal parameters shall include the following information: sampling date, sample location, date of analysis, parameter name, CAS number, analytical method/ number, method detection limit (MDL), laboratory practical quantitation limit (PQL), reporting units, and concentration detected.

Discharge Monitoring Reports must be submitted monthly whether or not the facility was discharging. If there was no discharge during a given monitoring period, submit the report as required with the words "no discharge" entered in place of the monitoring results.

B. Records Retention

The Permittee shall retain records of all monitoring information for a minimum of three (3) years. Such information shall include all calibration and maintenance records and all original recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by the Director.

C. Recording of Results

For each measurement or sample taken, the Permittee shall record the following information: (1) the date, exact place, method, and time of sampling or measurement; (2) the individual who performed the sampling or measurement; (3) the dates the analyses were performed; (4) the individual who performed the analyses; (5) the analytical techniques or methods used; and (6) the results of all analyses.

D. Additional Monitoring by the Permittee

If the Permittee monitors any pollutant more frequently than required by this permit using test procedures specified by Condition S2. of this permit, then the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Permittee's DMR.

E. Twenty-four Hour Notice of Noncompliance Reporting

1. The permittee must take the following action upon violation of any permit condition:
   Immediately take action to stop, contain, and cleanup unauthorized discharges or otherwise stop the noncompliance and correct the problem and, if applicable, immediately repeat sampling and analysis. The results of any repeat sampling shall be submitted to Ecology within 30 days of sampling.

2. The permittee must report the following occurrences of noncompliance by telephone, to Ecology's Industrial Section, **within 24 hours** from the time the Permittee becomes aware of any of the following circumstances. Outside of normal working hours, voice mail or email notification of the Industrial Section responsible engineer, and 24 hours spill reporting hot line if necessary, shall meet this requirement:

a. any noncompliance that may endanger health or the environment;

b. any unanticipated **bypass** that exceeds any effluent limitation in the permit (See S.4 B. “bypass procedures”);

c. any **upset** that exceeds any effluent limitation in the permit (See G.16, “Upset”);

d. any violation of a maximum daily or instantaneous maximum discharge limitation for any of the pollutants in S1.A.; or

e. any overflow prior to the treatment works, whether or not such overflow endangers health or the environment or exceeds any effluent limitation in the permit.

3. The Permittee must also provide a written submission **within five days** of the time that the Permittee becomes aware of any event required to be reported under subpart 2, above. The written submission must contain:
   a. a description of the noncompliance and its cause;
   b. the period of noncompliance, including exact dates and times;
   c. the estimated time noncompliance is expected to continue if it has not been corrected;
   d. steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance; and
   e. if the non compliance involves an overflow prior to the treatment works, an estimate of the quantity (in gallons) of untreated overflow.

4. Ecology may waive the written report on a case-by-case basis if the oral report has been received within 24 hours of the noncompliance. If Ecology waives the 5-day written report, a written report of the incident shall be submitted with the monthly Discharge Monitoring Report.

F. Other Noncompliance Reporting.

The permittee must report all instances of noncompliance, not required to be reported immediately or within 24 hours, at the time that monitoring reports for S3.A ("Reporting") are submitted. The reports must contain the information listed in paragraph E above, (“Twenty-four Hour Notice of Noncompliance Reporting”). Compliance with these requirements does not relieve the Permittee from responsibility to maintain continuous compliance with the terms and conditions of this permit or from the resulting liability for failure to comply.

G. Reporting - Shellfish Protection

Unauthorized discharges such as collection system overflows, plant bypasses, or failure of the disinfection system, shall be reported **immediately** to the Department of Ecology and the Department of Health, Shellfish Program. The Department of Ecology's Northwest Regional Office 24-hr number is **206-649-7000**, and the Department of Health's Shellfish 24-hr. number is **360-786-4183**.

S4. OPERATIONS AND MAINTENANCE

The Permittee shall, at all times, properly operate and maintain all facilities or systems of treatment and control (and related appurtenances) which are installed to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems, which are installed by a Permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

A. Operations and Maintenance Manual

The approved Operations and Maintenance Manual shall be kept available at the permitted facility and all operators shall follow the instructions and procedures of this manual.

In addition to the requirements of WAC 173-240-150(1) and (2), the O&M Manual shall include: Emergency procedures for plant shutdown and cleanup in event of wastewater system upset or failure. The O&M Manual shall be reviewed by the permittee at least annually and made available to the agency upon request.

For the purposes of this NPDES permit, a Treatment System Operating Plan (TSOP) is a concise summary of specifically defined elements of the O&M Manual. The TSOP shall not conflict with the O&M Manual and shall include the following information:

1. A baseline operating condition, which describes the operating parameters and procedures, used to meet the effluent limitations of S1 at the production levels used in developing these limitations.
2. In the event of production rates, which are below the baseline levels used to establish these limitations, the plan shall describe the operating procedures and conditions needed to maintain design treatment efficiency. The monitoring and reporting shall be described in the plan.
3. In the event of an upset, due to plant maintenance activities, severe storm water events, start ups or shut downs, or other causes, the plan shall describe the operating procedures and conditions employed to mitigate the upset. The monitoring and reporting shall be described in the plan.
4. A description of any regularly scheduled maintenance or repair activities at the facility which would affect the volume or character of the wastes discharged to the wastewater treatment system and a plan for monitoring and treating/controlling the discharge of maintenance-related materials (such as cleaners, degreasers, solvents, etc.).

An updated Treatment System Operating Plan shall be submitted to the Department **by November 2, 2010**. This plan shall be updated and submitted, as necessary, to include requirements for any major modifications of the treatment system.

B. Bypass Procedures

Bypass, which is the intentional diversion of waste streams from any portion of a treatment facility, is prohibited, and the Department may take enforcement action against a Permittee for bypass unless one of the following circumstances (1, 2, or 3) is applicable.

1. Bypass for Essential Maintenance without the Potential to Cause Violation of Permit Limits or Conditions.

   Bypass is authorized if it is for essential maintenance and does not have the potential to cause violations of limitations or other conditions of this permit, or adversely impact public health as determined by the Department prior to the bypass. The Permittee shall submit prior notice, if possible, at least ten (10) days before the date of the bypass.

2. Bypass Which is Unavoidable, Unanticipated, and Results in Noncompliance of this Permit.

   This bypass is permitted only if:

   a. Bypass is unavoidable to prevent loss of life, personal injury, or severe property damage. “Severe property damage” means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass.

   b. There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment downtime (but not if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance), or transport of untreated wastes to another treatment facility.

   c. The Department is properly notified of the bypass as required in condition S3E of this permit.

3. Bypass which is Anticipated and has the Potential to Result in Noncompliance of this Permit.

   The Permittee shall notify the Department at least thirty (30) days before the planned date of bypass. The notice shall contain (1) a description of the bypass and its cause; (2) an analysis of all known alternatives which would eliminate, reduce, or mitigate the need for bypassing; (3) a cost-effectiveness analysis of alternatives including comparative resource damage assessment; (4) the minimum and maximum duration of bypass under each alternative; (5) a recommendation as to the preferred alternative for

conducting the bypass; (6) the projected date of bypass initiation; (7) a statement of compliance with SEPA; (8) a request for modification of water quality standards as provided for in WAC 173-201A-110, if an exceedance of any water quality standard is anticipated; and (9) steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass.

For probable construction bypasses, the need to bypass is to be identified as early in the planning process as possible. The analysis required above shall be considered during preparation of the engineering report or facilities plan and plans and specifications and shall be included to the extent practical. In cases where the probable need to bypass is determined early, continued analysis is necessary up to and including the construction period in an effort to minimize or eliminate the bypass.

The Department will consider the following prior to issuing an administrative order for this type bypass:

a. If the bypass is necessary to perform construction or maintenance-related activities essential to meet the requirements of this permit.

b. If there are feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment down time, or transport of untreated wastes to another treatment facility.

c. If the bypass is planned and scheduled to minimize adverse effects on the public and the environment.

After consideration of the above and the adverse effects of the proposed bypass and any other relevant factors, the Department will approve or deny the request. The public shall be notified and given an opportunity to comment on bypass incidents of significant duration, to the extent feasible. Approval of a request to bypass will be by administrative order issued by the Department under RCW 90.48.120.

C. Duty to Mitigate

The Permittee is required to take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

S5. FACILITY LOADING

Design Criteria

Flows or waste loadings of the following design criteria for the permitted treatment facility shall not be exceeded:

Process Wastewater treatment plant capacity (excludes storm water)	
Average monthly flow for the maximum month[1]	4.3 MGD

Average monthly COD for the maximum month[2]	1700 mg/l

[1] as measured across the process wastewater treatment system (if constructed, see S5 B. below)

[2] as measured at the primary clarifier

A. Report

By **November 2, 2010**, the Permittee shall submit an analysis to the Department that compares current conditions within the refinery to the predicted design capacity of the wastewater treatment system, as determined in the approved Tesoro engineering report dated April 28, 2000. The analysis shall also predict the next permit term's production increases, any new loadings to the wastewater treatment plant and the resultant impacts to the wastewater treatment system capacity. The report shall include a discussion of any production increases, changes to crude sources, modifications to process units, changes in additives, additional sources of wastewater, etc., that could potentially cause a change in wastewater characteristics.

If predicted waste loads exceed approved design capacities the Permittee shall update the engineering report for the wastewater treatment system by planning for new or upgraded treatment facilities to treat expected increases in waste loads. This update shall be submitted at least one hundred eighty (180) days prior to the planned start of construction unless a shorter time is approved by Ecology. The update shall be prepared in accordance with Chapter 173-240 WAC and include at minimum the following elements:

1 Design and performance flow and loading capacity of the overall system shall be determined. Specifically, TSS, BOD, and COD loading capacity shall be determined. Flow data shall be presented in terms of average dry weather flow, average monthly flow of the maximum month, and peak hourly flow. If flow-monitoring data is not available for wastewater streams then an estimate shall be provided with the method used for estimation.

2 Basic design data and sizing calculations for each unit in the wastewater treatment system. Clarifier information should include detention times, overflow rates, solids and weir loading rates, volume and depth. Activated sludge basin information shall include hydraulic detention time, volumetric loading, MLSS, F:M ratio, return ratio, and sludge residence time. Information for settling ponds shall include solids loading rates, volume and retention time. This information shall be provided for design criteria parameters -- BOD, TSS, and oil and grease, where applicable.

B. Flow Measurement

The permittee shall submit an engineering report with cost estimates **by July 1, 2007** for Ecology review and approval. The engineering report shall include an evaluation of flow measurement options through both the process wastewater treatment system and the stormwater system and provide a construction schedule for the chosen feasible and approved alternative. Flow monitoring shall be located within the process wastewater treatment system such that the measured flow is not impacted by recycle streams.

S6. NON-ROUTINE AND UNANTICIPATED DISCHARGES

A. Beginning on the effective date of this permit, the Permittee may discharge non-routine wastewater on a case-by-case basis if approved by the Department. Prior to any such discharge, the Permittee shall contact the Department and **at a minimum** provide the following information:

1. The nature of the activity that is generating the discharge.
2. Any alternatives to the discharge, such as reuse, storage, or recycling of the water.
3. The total volume of water expected to be discharged.
4. The results of the chemical analysis of the water. The water shall be analyzed for all constituents limited for the Permittee's discharge. The analysis shall also include hardness, any metals that are limited by water quality standards, and any other parameter deemed necessary by the Department. All discharges shall comply with the effluent limitations as established in Condition S1. of this permit, water quality standards, sediment management standards, and any other limitations imposed by the Department.
5. The date of proposed discharge and the rate at which the water will be discharged, in gallons per minute. The discharge rate shall be limited to that which will not cause erosion of ditches or structural damage to culverts and their entrances or exits.

B. The discharge cannot proceed until the Department has reviewed the information provided and has authorized the discharge. Authorization from the Department will be by letter to the Permittee or by an Administrative Order.

S7. ACUTE TOXICITY

A. Monitoring When There Is No Permit Limit for Acute Toxicity

The Permittee shall test final effluent **once in the last summer** and **once in the last winter** prior to submission of the application for permit renewal. **All species listed below shall be used on each sample and the results submitted to the Department by November 2, 2010.** The acute toxicity testing shall determine an LC50. The percent survival in 100% effluent shall also be reported.

Acute toxicity tests shall be conducted with the following species and protocols:

a) Fathead minnow, *Pimephales promelas* (96 hour static-renewal test, method: EPA/600/4-90/027F

b) Daphnid, *Ceriodaphnia dubia*, *Daphnia pulex*, or *Daphnia magna* (48 hour static test, method: EPA/600/4-90/027F. The Permittee shall choose one of the three species and use it consistently throughout effluent recharacterization.

B. Sampling and Reporting Requirements

1. All reports for effluent characterization or compliance monitoring shall be submitted in accordance with the most recent version of Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity*

Test Review Criteria in regards to format and content. Reports shall contain bench sheets and reference toxicant results for test methods. If the lab provides the toxicity test data on floppy disk for electronic entry into the Department's database, then the Permittee shall send the disk to the Department along with the test report, bench sheets, and reference toxicant results.

2. Testing shall be conducted on effluent grab samples. Samples taken for toxicity testing shall be cooled to 4 degrees Celsius immediately after being collected and shall be sent to the lab as soon as practicable upon completion. The lab shall begin the toxicity testing as soon as possible but no later than 36 hours after sampling was ended.

3. All samples and test solutions for toxicity testing shall have water quality measurements as specified in Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* or most recent version thereof.

4. All toxicity tests shall meet quality assurance criteria and test conditions in the most recent versions of the EPA manual listed in subsection A. and the Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. If test results are determined to be invalid or anomalous by the Department, testing shall be repeated with freshly collected effluent.

5. Control water and dilution water shall be laboratory water meeting the requirements of the EPA manual listed in subsection A. Dilution water for toxicity testing shall be laboratory water of sufficient quality for good control performance.

6. The whole effluent toxicity test series shall be run on an unmodified sample of final effluent.

7. The Permittee may choose to conduct a full dilution series test during compliance monitoring in order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include a 5% dilution (the ACEC).

S8. CHRONIC TOXICITY

A. Monitoring When There Is No Permit Limit for Chronic Toxicity

During the third or fourth year of the Permit term the Permittee shall conduct chronic toxicity testing on the final effluent. The two chronic toxicity tests listed below shall be conducted on each sample taken for effluent characterization. **The results of this chronic toxicity testing shall be submitted to the Department by November 2, 2010.**

During the third or fourth year, effluent testing for chronic toxicity shall be conducted quarterly. The Permittee shall conduct chronic toxicity testing on a series of at least five concentrations of effluent in order to determine appropriate point estimates. This series of dilutions shall include a 5% concentration (the ACEC). The Permittee

shall compare the ACEC to the control using hypothesis testing at the 0.05 level of significance as described in Appendix H, EPA/600/4-89/001.

Chronic toxicity tests shall be conducted with two of the following species as identified below and the most recent version of the following protocols:

Saltwater Chronic Toxicity Test Species		Method
Top Smelt	*Atherinops affinis*	EPA/600/R-95/136 (or)
Silverside minnow	*Menidia beryllina*	EPA/600/4-91/003
Pacific oyster	*Crassostrea gigas*	EPA/600/R-95/136 (or)
Mussel	*Mytilus sp.*	EPA/600/R-95/136

The Permittee shall use the West Coast fish (topsmelt, *Atherinops affinis*) for toxicity testing unless the lab cannot obtain a sufficient quantity of a West Coast species in good condition in which case the East Coast fish (silverside minnow, *Menidia beryllina*) may be substituted.

The Pacific oyster and mussel tests shall be run in accordance with EPA/600/R-95/136 and the bivalve development test conditions in the Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* or most recent version thereof.

B. Sampling and Reporting Requirements

1. All reports for effluent characterization or compliance monitoring shall be submitted in accordance with the most recent version of Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* in regards to format and content. Reports shall contain bench sheets and reference toxicant results for test methods. If the lab provides the toxicity test data on floppy disk for electronic entry into the Department's database, then the Permittee shall send the disk to the Department along with the test report, bench sheets, and reference toxicant results.

2. Testing shall be conducted on effluent grab samples. Samples taken for toxicity testing shall be cooled to 4 degrees Celsius immediately after being collected and shall be sent to the lab as soon as practicable upon completion. The lab shall begin the toxicity testing as soon as possible but no later than 36 hours after sampling was ended.

3. All samples and test solutions for toxicity testing shall have water quality measurements as specified in Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* or most recent version thereof.

4. All toxicity tests shall meet quality assurance criteria and test conditions in the most recent versions of the EPA manual listed in subsection A. and the Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. If test results are determined to be invalid or anomalous by the Department, testing shall be repeated with freshly collected effluent.

5. Control water and dilution water shall be laboratory water meeting the requirements of the EPA manual listed in subsection A. Dilution water for toxicity testing shall be laboratory water of sufficient quality for good control performance.

6. The whole effluent toxicity test series shall be run on an unmodified sample of final effluent.

7. The Permittee may choose to conduct a full dilution series test during compliance monitoring in order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include the ACEC.

8. All whole effluent toxicity tests that involve hypothesis testing and do not comply with the chronic statistical power standard of 39% as defined in WAC 173-205-020 must be repeated on a fresh sample with an increased number of replicates to increase the power.

S9. OUTFALL EVALUATION

The Permittee shall inspect once per permit cycle the submerged portion of the outfall line and diffuser to document its integrity and continued function. If conditions allow for a photographic verification, it shall be included in the report. The permittee shall submit the inspection report to the Department by **November 2, 2010**.

S10. POLLUTION PREVENTION PLANNING AND ACTIVITIES

Pollution prevention planning/activities at the facility include:

- the new pollution prevention plan (P2) projects identified for the upcoming permit cycle in the plan update, and
- the Standard Operating Procedures (SOPs) , Best Management Practices (BMPs) and work practices developed through pollution prevention activities from previous permit pollution prevention plans, stormwater pollution prevention plans (SWPPP), solid waste control plans, and spill plans.

The Permittee shall continue to ensure proper operation and maintenance of the refinery process units and wastewater treatment system by following existing SOPs, BMPs and work practices. These procedures and other measures/facilities currently employed at the

refinery to prevent or minimize the potential for release of pollutants to the wastewater treatment system, storm water, and/or waters of the state shall be continued or maintained unless modified by the pollution prevention plan updates required below.

Solid Waste

The Permittee shall handle and dispose of all solid waste material in such a manner as to prevent its entry into state ground or surface water. The Permittee shall not allow leachate from its solid waste material to enter state waters without providing all known, available, and reasonable methods of treatment, nor allow such leachate to cause violations of the State Surface Water Quality Standards, Chapter 173-201A WAC, or the State Ground Water Quality Standards, Chapter 173-200 WAC. The Permittee shall apply for a permit or permit modification as may be required for such discharges to state ground or surface waters.

Storage Tank Wastewater

The operation of removing wastewater from oil, product, and intermediate distillate storage tanks shall be performed in a manner and with facilities as required to prevent the wastewater from draining or spilling onto the ground.

A. Pollution Prevention Plan Development and Implementation

The Permittee shall prepare an update to their Pollution Prevention Plan and submit it to the Department for review and approval by **May 1st, 2007**. The Permittee shall implement the approved pollution prevention plan update and any approved modifications to the plan and abide by the timeframes identified throughout the term of the permit.

The objective of this update is to identify any new sources of pollutants, to reevaluate previously identified pollution prevention opportunities and to identify any new opportunities and implement those that are technically and economically achievable. Previously identified opportunities include those identified by the facility in their current Pollution Prevention Plan and those identified in Ecology Publication 02-07-017 (Water Pollution Prevention Opportunities in Petroleum Refineries). The update shall also include an evaluation of the existing SOPs, BMPs and work practices developed under previous pollution prevention activities.

B. Specific Plan Update Requirements

The Permittee shall update the following plan elements as necessary: the policy statement and signature, employee involvement, training and awareness, descriptions of current pollution prevention activities, and the description of potential pollutants and sources. Appendix A includes references to guidance documents, specific items to be included in the plan, and procedures for identifying, evaluating and prioritizing pollution prevention opportunities. Other information available to the Permittee may also be used in preparing the plan.

The updated plan shall include a schedule for implementation of each newly selected opportunity. If a detailed analysis of technical and economical feasibility for any pollution prevention opportunity will extend beyond the deadline for submitting the

updated plan, the Permittee shall include a schedule for completing the analysis in the plan submittal. The timeframe for implementing any opportunities scheduled for further evaluation and then selected shall be provided in the biennial report.

C. Storm water Inspections

The Permittee shall conduct two storm water inspections per year; one during the wet season (October 1 through April 30) and the other during the dry season (May 1 through September 30).

The wet season inspection shall be conducted during a rainfall event and shall include observations of the presence of any floating materials, suspended solids, oil and grease, discolorations, turbidity, odor, etc. in storm water runoff throughout the refinery that could contribute to a discharge off-site.

The dry season inspection shall determine the presence of unpermitted non-storm water discharges such as sanitary wastewater, non-contact cooling water, process wastewater, and drainage from raw material/product/waste storage to the storm water drainage system. If an unpermitted, non-storm water discharge is discovered, the Permittee shall immediately notify the Department.

Inspections shall be conducted by staff that is knowledgeable and trained in the application of BMPs and pollution prevention activities at the refinery.

D. Plan Evaluation and Biennial Reporting

The Permittee shall periodically evaluate and modify, as necessary, the pollution prevention plan and associated existing SOPs, BMPs and work practices to ensure that they have been updated or otherwise modified to reflect current conditions, that measures to reduce or eliminate pollutant loadings selected in the plan are adequate and are being properly implemented in accordance with the terms of the permit, and whether any additional controls are needed. The Permittee shall modify the pollution prevention plan whenever there is a change in design, construction, operation, or maintenance of the facility which significantly increases the generation or potential generation of water pollutants or causes the pollution prevention plan and associated existing SOPs, BMPs and work practices to be less effective in controlling pollutants. The Permittee shall provide for implementation of any modifications to the pollution prevention plan in a timely manner.

The Permittee shall **submit a biennial progress report every two years thereafter (starting May 1st, 2009)** of submitting the Pollution Prevention Plan Update as required by S10.A. The report shall identify the implementation status of each pollution prevention opportunity selected, the benefits or other results of implementation actions completed, and any modifications or updates to the plan. The report shall also include a summary of the results of storm water inspections.

E. Continuous Improvement

In maintaining, implementing, and updating the pollution prevention plan, the Permittee is encouraged to employ continuous improvement principles, including the systematic and ongoing identification, evaluation, and implementation of pollution prevention opportunities in all decisions having environmental consequences.

S11. CONSTRUCTION STORMWATER POLLUTION PREVENTION

A standard Stormwater Pollution Prevention Plan (SWPPP) for construction activities greater than one acre and less than five (1-5) acres, including construction dewatering, shall be prepared and submitted to the Department by **September 1st,2006.** Project details for each construction project and any site specific issues for that project that require additional BMPs shall be submitted to the Department **at least 90 days prior to the start of construction or another time period as agreed to by Ecology.**

A Stormwater Pollution Prevention Plan (SWPP) for construction activity occurring on sites greater than 5 acres, including construction dewatering, shall be prepared and implemented prior to the start of each construction project. Project details for each construction project shall be submitted to the Department at least **90 days prior to the start of construction or another time period as agreed to by Ecology**.

Each plan shall be prepared in accordance with the objectives and requirements identified in Special Condition S.9. included in the National Pollutant Discharge Elimination System and State Waste Discharge General Permit for storm water discharges associated with construction activities issued by Ecology on November 16th , 2005, or as revised.

The permittee is responsible for achieving compliance with state of Washington surface water quality standards (Chapter 173-201A WAC), sediment management standards (Chapter 173-204 WAC), ground water quality standards (Chapter 173-200 WAC), and human health based criteria in the National Toxics Rule (Federal Register, Vol. 57, No. 246, Dec. 22, 1992, pages 60848-60923). Where construction sites are not in compliance with these standards, the permittee shall take immediate action(s) to achieve compliance by implementing additional BMPs and/or improved maintenance of existing BMPs.

S12. PRIORITY POLLUTANT TESTING

The Permittee shall annually sample the final effluent and analyze the sample for the priority pollutants and other pollutants listed in the table below. The detection limit and the method shall conform to those listed. The data shall be in tabular form with the detection limit, the value including units, and the method listed. Each annual data report shall be sent to Ecology **by November 1st of each year beginning in 2006**.

This table is a list of all priority pollutants. It includes PCBs and pesticides that are not required to be tested for unless they are used on site.

Pollutant	CAS Number (if available)	Analytical Protocol as EPA Part 136 methods or Standard Methods	Detection or Quantitation Level
Metals, Cyanide & Total Phenols (Part C)			**DL µg/l**
Antimony, Total	7440-36-0	204.2	3
Arsenic, Total	7440-38-2	206.2	1
Beryllium, Total	7440-43-9	210.2	1
Cadmium, Total	7440-43-9	213.2	0.1
Chromium, Total	7440-47-3	218.2	1
Copper, Total	7440-50-8	220.2	1
Lead, Total	7439-92-1	239.2	1
Mercury, Total	7439-97-6	1631	0.2 ng/l
Nickel, Total	7440-02-0	249.2	1
Selenium, Total	7782-49-2	270.2	2
Silver, Total	7440-22-4	272.2	0.2
Thallium, Total	7440-28-0	279.2	1
Zinc, Total	7440-66-6	289.2	0.05
Cyanide, Total	57-12-5	335.2 or 335.3	20
Cyanide, WAD	57-12-5	335.1	10
Phenols, total		420.1 or 420.2	
Dioxin			**QL µg/l**
2,3,7,8-Tetra-Chlorodibenzo-P-Dioxin	1764- 01-6	1613	0.00001
Volatile Compounds			**QL µg/l**
Acrolein	107-02-8	624	50
Acrylonitrile	107-13-1	624	50
Benzene	71-43-2	624	10
Bis (*chloromethyl)* Ether	542-88-1	624	10
Bromoform	75-25-2	624	10
Carbon Tetrachloride	56-23-5	624	10
Chlorobenzene	108-90-7	624	50
Chlorodibromomethane	124-48-1	624	10
Chloroethane	75-00-3	624	10
2-Chloroethylvinyl Ether	110-75-8	624	50
Chloroform	67-66-3	624	10

Pollutant	CAS Number (if available)	Analytical Protocol as EPA Part 136 methods or Standard Methods	Detection or Quantitation Level
Dichlorobromomethane	75-27-4	624	10
Dichlorodifluromethane	75-71-8	624	10
1,1-Dichloroethane	75-34-3	624	10
1,2-Dichloroethane	107-06-2	624	10
1,1-Dichloroethylene	75-35-4	624	10
1,2-Dichloropropane	78-87-5	624	10
1,3-Dichloropropylene	542-75-6	624	10
Ethylbenzene	100-41-4	624	10
Methyl Bromide	74-83-9	624	50
Methyl Chloride	74-87-3	624	50
Methylene Chloride	75-09-2	624	20
1,1,2,2-Tetrachloroethane	79-34-5	624	10
Tetrachloroethylene	127-18-4	624	10
Toluene	108-88-3	624	10
1,2-Trans-Dichloroethylene	156-60-5	624	10
1,1,1-Trichloroethane	71-55-6	624	10
1,1,2-Trichloroethane	79-00-5	624	10
Trichloroethylene	79-01-6	624	10
Trichlorofluromethane	75-69-4	624	10
Vinyl Chloride	75-01-4	624	10
Acid Compounds			**QL µg/l**
2-Chlorophenol	95-57-8	625	10
2,4-Dichlorophenol	120-83-2	625	10
2,4-Dimethylphenol	105-67-9	625	10
4,6-Dinitro-O-Cresol (2-methyl-4,6 – dinitrophenol)	534-52-1	625	50
2,4 Dinitrophenol	51-28-5	625	50
2-Nitrophenol	88-75-5	625	20
4-Nitrophenol	100-02-7	625	50
P-Chloro-M-Cresol	59-50-7	625	10
Pentachlorophenol	87-86-5	625	50
Phenol	108-95-2	625	10
2,4,6-Trichlorophenol	88-06-2	625	10
Base/Neutral Compounds			**QL µg/l**
Acenaphthene	83-32-9	625	10
Acenaphtylene	208-96-8	625	10
Anthracene	120-12-7	625	10

Pollutant	CAS Number (if available)	Analytical Protocol as EPA Part 136 methods or Standard Methods	Detection or Quantitation Level
Benzidine	92-87-5	625	50
Benzo (*a*) Anthracene	56-55-3	625	10
Benzo (*a*) Pyrene	50-32-8	625	10
3,4-Benzofluoranthene	205-99-2	625	10
Benzo (*ghi*) Perylene	191-24-2	625	20
Benzo *(k*) Fluoranthene	207-08-9	625	10
Bis (*2-Chloroethoxy)* Methane	111-91-1	625	10
Bis (*2-Chloroethyl*) Ether	111-44-4	625	10
Bis (*2-Chloroisopropyl*) Ether	108-60-1	625	10
Bis (*2-Ethylhexyl*) Phthalate	117-81-7	625	10
4-Bromophenyl Phenyl Ether	101-55-3	625	10
Butyl Benzyl Phthalate	85-68-7	625	10
Base/Neutral Compounds			**QL µg/l**
2-Chloronaphthalene	91-58-7	625	10
4-Chlorophenyl Phenyl Ether	7005-72-3	625	10
Chrysene	218-01-9	625	10
Dibenzo (*a,h*) Anthracene	53-70-3	625	20
1,2-Dichlorobenzene	95-50-1	625	10
1,3-Dichlorobenzene	541-73-1	625	10
1,4-Dichlorobenzene	106-46-7	625	10
3,3'-Dichlorobenzidine	91-94-1	625	50
Diethyl Phthalate	84-66-2	625	10
Dimethyl Phthalate	131-11-3	625	10
Di-N-Butyl Phthalate	84-74-2	625	10
2,4-Dinitrotoluene	121-14-2	625	10
2,6-Dinitrotoluene	606-20-2	625	10
Di-n-octyl Phthalate	117-84-0	625	10
1,2-Diphenylhydrazine (*as Azobenzene*)	122-66- 7	625	20
Fluoranthene	206-44-0	625	10
Fluorene	86-73-7	625	10
Hexachlorobenzene	118-74-1	625	10
Hexachlorobutadiene	87-68-3	625	10
Hexachlorocyclopentadiene	77-47-4	625	10
Hexachloroethane	67-72-1	625	20
Indeno (*1,2,3-cd*) Pyrene	193-39-5	625	20
Isophorone	78-59-1	625	10
Naphthalene	91-20-3	625	10
Nitrobenzene	98-95-3	625	10
N-Nitrosodimethylamine	62-75-9	625	50
N-Nitrosodi-N-Propylamine	621-64-7	625	20

Pollutant	CAS Number (if available)	Analytical Protocol as EPA Part 136 methods or Standard Methods	Detection or Quantitation Level
N-Nitrosodiphenylamine	86-30-6	625	20
Phenanthrene	85-01-8	625	10
Pyrene	129-00-0	625	10
1,2,4-Trichlorobenzene	120-82-1	625	10
GC/MS Fraction – Pesticides and PCBs			**QL µg/l**
Aldrin	309-00-2	608	0.05
a-BHC	319-84-6	608	0.05
β-BHC	319-85-7	608	0.05
ϒ-BHC	58-89-9	608	0.05
δ-BHC	319-86-8	608	0.05
Chlordane	57-74-9	608	0.2
4,4'-DDT	50-29-3	608	0.1
4,4'-DDE	72-55-9	608	0.1
4,4' DDD	72-54-8	608	0.1
Dieldrin	60-57-1	608	0.1
a-Endosulfan	959988	608	0.1
β-Endosulfan	33213659	608	0.1
Endosulfan Sulfate	1031-07-8	608	0.1
Endrin	72-20-8	608	0.1
Endrin Aldehyde	7421-83-4	608	0.1
Heptachlor	76-44-8	608	0.05
Heptachlor Epoxide	1024-57-3	608	0.05
PCB-1242	53469-21-9	608	1.0
PCB-1254	11097-69-1	608	1.0
PCB-1221	11104-28-2	608	1.0
PCB-1232	11141-16-5	608	1.0
PCB-1248	12672-29-6	608	1.0
PCB-1260	11096-82-5	608	1.0
PCB-1016	12674-11-2	608	1.0
Toxaphene	8001-35-2	608	5.0

S13. DANGEROUS WASTES – PERMIT BY RULE REQUIREMENTS

The permittee is authorized to treat dangerous wastes, generated on or off-site, at the wastewater treatment facility under the permit by rule provisions of Chapter WAC 173-303-802(5). This authorization is limited to the onsite and off-site waste streams identified on the permit application and application amendments as approved by Ecology. The permittee shall maintain records of the off-site waste streams treated at the wastewater facility. The origin, volume, known waste constituents, any analytical data, and date of addition, shall be recorded. This information shall be available to an authorized representative of the Department as per General Condition G2. A summary of the off-site dangerous wastes accepted and treated by the permittee shall be submitted with the application for permit renewal.

S14. MERCURY POLLUTION PREVENTION PLAN

By May 1st, 2007, the permittee shall submit a mercury pollution prevention plan to Ecology. The plan shall include testing mercury concentrations in three crude oils processed at the refinery each year. A corresponding test of the waste water discharge shall also occur at these times. Historic crude oil analysis or assays can be used to demonstrate mercury composition. Testing shall occur over three years. The permittee may request testing modifications from Ecology. This activity can be coordinated with the mercury testing specified in S1.A.

S15. DIOXIN STUDY AND AKART ENGINEERING REPORT

A. AKART Engineering Report

The Permittee shall prepare an engineering report to study treatment and prevention alternatives for the catalytic reformer wastewater stream to prevent dioxin and furan congeners from being discharged into the final effluent and to ensure that all known, available, and reasonable methods of treatment and prevention (AKART) are being applied.

Two copies of the report should be prepared in accordance with WAC 173-240 and submitted to the Department for review and approval **by May 1st, 2009.** The report shall include a schedule for preparing plans and specifications and for constructing/implementing the treatment or prevention alternative selected.

B. Wastewater Sampling

The Permittee shall sample the final effluent (001) and the upstream wastewater stream from the catalytic reformer units for chlorinated dioxin and furan (2,3,7,8-Cl substituted tetra- through octa- congeners) concentrations twice during the permit cycle. The wastewater stream from the catalytic reformer units shall be sampled during two different catalyst regeneration events. A grab sample shall be collected from each caustic wash during the regeneration of each reformer unit.

Analysis including sample containers and QA/QC shall be conducted in accordance with Method 1613: Tetra- through Octa- Chlorinated Dioxins and Furans by Isotopic Dilution HRGC/HRMS, USEPA Office of Water, Engineering and Analysis Division, Revision A. The Minimum Level (ML) of detection for 2,3,7,8- TCDD/TCDF shall be 10 parts per quadrillion or less. The Permittee shall report the lowest detected concentrations of all 2,3,7,8-Cl substituted dioxins and furans that meet the quality assurance specifications of Method 1613, including all detected concentrations below the calibration limits of Method 1613.

C. Dioxin Study Report

The Permittee shall submit to the Department a Dioxin Study Report containing the results of the sampling and analysis **by May 1st, 2009**.

The wastewater data report to Ecology shall include: date sampled, total flow for each wash, and the concentration of the 2,3,7,8-Cl substituted tetra- through octa- dioxin and furan congeners from each caustic wash. The Permittee shall require the laboratory to report and maintain on file for each sample set: the analytical holding times, summary of internal precision and recovery, calibration data, analysis sequence (run logs), daily checks (ongoing precision and accuracy standards, blanks, instrument checks), QA/QC data (duplicates, matrix spikes/labeled analog spikes), and raw data (chromatograms).

GENERAL CONDITIONS

G1. SIGNATORY REQUIREMENTS

All applications, reports, or information submitted to the Department shall be signed and certified.

A. All permit applications shall be signed by either a responsible corporate officer of at least the level of vice president of a corporation, a general partner of a partnership, or the proprietor of a sole proprietorship.

B. All reports required by this permit and other information requested by the Department shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

1. The authorization is made in writing by a person described above and submitted to the Department.

2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

C. Changes to authorization. If an authorization under paragraph B.2 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph B.2 above must be submitted to the Department prior to or together with any reports, information, or applications to be signed by an authorized representative.

D. Certification. Any person signing a document under this section shall make the following certification:

> I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

G2. RIGHT OF INSPECTION AND ENTRY

The Permittee shall allow an authorized representative of the Department, upon the presentation of credentials and such other documents as may be required by law:

A. To enter upon the premises where a discharge is located or where any records must be kept under the terms and conditions of this permit.

B. To have access to and copy - at reasonable times and at reasonable cost - any records required to be kept under the terms and conditions of this permit.

C. To inspect - at reasonable times - any facilities, equipment (including monitoring and control equipment), practices, methods, or operations regulated or required under this permit.

D. To sample or monitor - at reasonable times - any substances or parameters at any location for purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act.

G3. PERMIT ACTIONS

This permit may be modified, revoked and reissued, or terminated either at the request of any interested person (including the permittee) or upon the Department's initiative. However, the permit may only be modified, revoked and reissued, or terminated for the reasons specified in 40 CFR 122.62, 122.64 or WAC 173-220-150 according to the procedures of 40 CFR 124.5.

A. The following are causes for terminating this permit during its term, or for denying a permit renewal application:

1. Violation of any permit term or condition.

2. Obtaining a permit by misrepresentation or failure to disclose all relevant facts.

3. A material change in quantity or type of waste disposal.

4. A determination that the permitted activity endangers human health or the environment or contributes to water quality standards violations and can only be regulated to acceptable levels by permit modification or termination [40 CFR part 122.64(3)].

5. A change in any condition that requires either a temporary or permanent reduction or elimination of any discharge or sludge use or disposal practice controlled by the permit [40 CFR part 122.64(4)].

6. Nonpayment of fees assessed pursuant to RCW 90.48.465.

7. Failure or refusal of the permittee to allow entry as required in RCW 90.48.090.

B. The following are causes for modification but not revocation and reissuance except when the permittee requests or agrees:

1. A material change in the condition of the waters of the state.

2. New information not available at the time of permit issuance that would have justified the application of different permit conditions.

3. Material and substantial alterations or additions to the permitted facility or activities which occurred after this permit issuance.

4. Promulgation of new or amended standards or regulations having a direct bearing upon permit conditions, or requiring permit revision.

5. The Permittee has requested a modification based on other rationale meeting the criteria of 40 CFR part 122.62.

6. The Department has determined that good cause exists for modification of a compliance schedule, and the modification will not violate statutory deadlines.

7. Incorporation of an approved local pretreatment program into a municipality’s permit.

C. The following are causes for modification or alternatively revocation and reissuance:

1. Cause exists for termination for reasons listed in A1 through A7, of this section, and the Department determines that modification or revocation and reissuance is appropriate.

2. The Department has received notification of a proposed transfer of the permit. A permit may also be modified to reflect a transfer after the effective date of an automatic transfer (General Condition G8) but will not be revoked and reissued after the effective date of the transfer except upon the request of the new permittee.

G4. REPORTING PLANNED CHANGES

The Permittee shall, as soon as possible, but no later than sixty (60) days prior to the proposed changes, give notice to the Department of planned physical alterations or additions to the permitted facility, production increases, or process modification which will result in: 1) the permitted facility being determined to be a new source pursuant to 40 CFR 122.29(b); 2) a significant change in the nature or an increase in quantity of pollutants discharged; or 3) a significant change in the Permittee's sludge use or disposal practices. Following such notice, and the submittal of a new application or supplement to the existing application, along with required engineering plans and reports, this permit may be modified, or revoked and reissued pursuant to 40 CFR 122.62(a) to specify and limit any pollutants not previously limited. Until such modification is effective, any new or increased discharge in excess of permit limits or not specifically authorized by this permit constitutes a violation.

G5. PLAN REVIEW REQUIRED

Prior to constructing or modifying any wastewater control facilities, an engineering report and detailed plans and specifications shall be submitted to the Department for approval in accordance with Chapter 173-240 WAC. Engineering reports, plans, and specifications shall be submitted at least one hundred eighty (180) days prior to the planned start of construction unless a shorter time is approved by Ecology. Facilities shall be constructed and operated in accordance with the approved plans.

G6. COMPLIANCE WITH OTHER LAWS AND STATUTES

Nothing in this permit shall be construed as excusing the Permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations.

G7. DUTY TO REAPPLY

The Permittee shall apply for permit renewal at least 180 days **(November 2, 2010)** prior to the specified expiration date of this permit.

G8. TRANSFER OF THIS PERMIT

In the event of any change in control or ownership of facilities from which the authorized discharge emanate, the Permittee shall notify the succeeding owner or controller of the existence of this permit by letter, a copy of which shall be forwarded to the Department.

A. Transfers by Modification

Except as provided in paragraph B below, this permit may be transferred by the Permittee to a new owner or operator only if this permit has been modified or revoked

and reissued under 40 CFR 122.62(b)(2), or a minor modification made under 40 CFR 122.63(d), to identify the new Permittee and incorporate such other requirements as may be necessary under the Clean Water Act.

B. Automatic Transfers

This permit may be automatically transferred to a new Permittee if:

1. The Permittee notifies the Department at least 30 days in advance of the proposed transfer date.
2. The notice includes a written agreement between the existing and new Permittee's containing a specific date transfer of permit responsibility, coverage, and liability between them.
3. The Department does not notify the existing Permittee and the proposed new Permittee of its intent to modify or revoke and reissue this permit. A modification under the subparagraph may also be minor modification under 40 CFR 122.63. If this notice is not received, the transfer is effective on the date specified in the written agreement.

G9. REDUCED PRODUCTION FOR COMPLIANCE

The Permittee, in order to maintain compliance with its permit, shall control production and/or all discharges upon reduction, loss, failure, or bypass of the treatment facility until the facility is restored or an alternative method of treatment is provided. This requirement applies in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost, or fails.

G10. REMOVED SUBSTANCES

Collected screenings, grit, solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall not be resuspended or reintroduced to the final effluent stream for discharge to state waters.

G11. DUTY TO PROVIDE INFORMATION

The Permittee shall submit to the Department, within a reasonable time, all information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Permittee shall also submit to the Department upon request, copies of records required to be kept by this permit.

G12. OTHER REQUIREMENTS OF 40 CFR

All other requirements of 40 CFR 122.41 and 122.42 are incorporated in this permit by reference.

G13. ADDITIONAL MONITORING

The Department may establish specific monitoring requirements in addition to those contained in this permit by administrative order or permit modification.

G14. PAYMENT OF FEES

The Permittee shall submit payment of fees associated with this permit as assessed by the Department.

G15. PENALTIES FOR VIOLATING PERMIT CONDITIONS

Any person who is found guilty of willfully violating the terms and conditions of this permit shall be deemed guilty of a crime, and upon conviction thereof shall be punished by a fine of up to ten thousand dollars ($10,000) and costs of prosecution, or by imprisonment in the discretion of the court. Each day upon which a willful violation occurs may be deemed a separate and additional violation.

Any person who violates the terms and conditions of a waste discharge permit shall incur, in addition to any other penalty as provided by law, a civil penalty in the amount of up to ten thousand dollars ($10,000) for every such violation. Each and every such violation shall be a separate and distinct offense, and in case of a continuing violation, every day's continuance shall be deemed to be a separate and distinct violation.

G16. UPSET

Definition – "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of the following paragraph are met.

A Permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that: 1) an upset occurred and that the Permittee can identify the cause(s) of the upset; 2) the permitted facility was being properly operated at the time of the upset; 3) the Permittee submitted notice of the upset as required in condition S3.E; and 4) the Permittee complied with any remedial measures required under S4.C of this permit.

In any enforcement proceeding the Permittee seeking to establish the occurrence of an upset has the burden of proof.

G17. PROPERTY RIGHTS

This permit does not convey any property rights of any sort, or any exclusive privilege.

G18. DUTY TO COMPLY

The Permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

G19. TOXIC POLLUTANTS

The Permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if this permit has not yet been modified to incorporate the requirement.

G20. PENALTIES FOR TAMPERING

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than two years per violation, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this Condition, punishment shall be a fine of not more than $20,000 per day of violation, or by imprisonment of not more than four (4) years, or by both.

G21. REPORTING ANTICIPATED NON-COMPLIANCE

The Permittee shall give advance notice to the Department by submission of a new application or supplement thereto at least one hundred and eighty (180) days prior to commencement of such discharges, of any facility expansions, production increases, or other planned changes, such as process modifications, in the permitted facility or activity which may result in noncompliance with permit limits or conditions. Any maintenance of facilities, which might necessitate unavoidable interruption of operation and degradation of effluent quality, shall be scheduled during non-critical water quality periods and carried out in a manner approved by the Department.

G22. REPORTING OTHER INFORMATION

Where the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.

G23. REPORTING REQUIREMENTS APPLICABLE TO EXISTING MANUFACTURING, COMMERCIAL, MINING, AND SILVICULTURAL DISCHARGERS

The Permittee belonging to the categories of existing manufacturing, commercial, mining, or silviculture must notify the Department as soon as they know or have reason to believe:

A. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following "notification levels:"

1. One hundred micrograms per liter (100 μg/l).

2. Two hundred micrograms per liter (200 μg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 μg/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony.

3. Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7).

4. The level established by the Director in accordance with 40 CFR 122.44(f).

B. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following "notification levels:"

1. Five hundred micrograms per liter (500μg/L).

2. One milligram per liter (1 mg/L) for antimony.

3. Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7).

4. The level established by the Director in accordance with 40 CFR 122.44(f).

G24. COMPLIANCE SCHEDULES

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than fourteen (14) days following each schedule date.

APPENDIX A

REFINERY NPDES POLLUTION PREVENTION PLANS – SPECIFIC REQUIREMENTS

GUIDANCE DOCUMENTS

Guidance available to develop a pollution prevention plan include the Storm water Management Manual for Western Washington published August 2001 by Ecology (Publication numbers 99-11 through 99-15), the 'Pollution Prevention and Best Management Practices' section of the Ecology Permit Writer's Manual (Chapter XII.) (Publication number 92-109), EPA's Organizational Guide to Pollution Prevention, 2001 available at http://www.p2ric.org/CachedPages/printguid.pdf, the methodologies of pollution prevention planning references available at http://www.ecy.wa.gov/programs/hwtr/p2/p3.html, and other information provided by the Ecology Permit Manager. The Permittee is expected to apply the methodologies from the existing guidance to cover other sources, pathways, or measures not covered within the strict scope of the WAC 173-307 guidance.

PLAN & PLAN IMPLEMENTATION REQUIREMENTS

Policy Statement and Signature:

The pollution prevention plan shall include a policy statement articulating management and corporate support for the plan and a commitment to implement the plan and to continued pursuit of pollution prevention opportunities. The plan, plan updates, and modifications shall be signed in accordance with Permit Condition G1.

Employee Involvement, Training, and Awareness:

The pollution prevention plan shall include a description of personnel training and employee involvement programs that emphasize pollution prevention and solicit employee ideas about pollution prevention opportunities and other environmental issues. Staff training records shall be maintained onsite and be available for inspection.

Description of Current Pollution Prevention Activities:

The plan shall include a description of preventive measures and facilities already employed at the refinery to prevent, reduce, eliminate, or control releases of pollutants to influent wastewater streams, storm water, and/or waters of the state.

Incorporating Other Pollution Prevention Plans

The Permittee may incorporate applicable portions of plans prepared for other purposes. Plans or portions of plans incorporated into the pollution prevention plan become enforceable requirements of this permit.

Description of Potential Pollutants and Sources:

The pollution prevention plan shall include a detailed description of the processes or activities that contribute or potentially contribute pollutants to the treatment plant influent, storm water, groundwater, and wetlands. Influent wastewater streams shall include those having daily average flow rates equal to or greater than 30 gpm at the point where the wastewater stream enters the collection system and the catalytic wash water spent caustic and wash water waste streams. Minor incidental waste streams to storm water, such as landscaping fertilizers, do not have to be included. The plan shall identify the

materials used, processed, stored, treated, or disposed of at the facility and the pollutants that are generated or potentially generated or released. The level of detail provided in the plan should be sufficient to help identify and understand how and why materials are used and pollutants generated or released. Process flow diagrams and/or material input/output information shall be included on a process unit basis.

The Permittee shall include in the plan all materials which may become pollutants or cause pollution upon reaching state waters, including, but not limited to: 1) persistent bioaccumulative and toxic chemicals (PBTs), 2) oil and petroleum products and, 3) materials which, when spilled or otherwise released into the environment, would be designated Dangerous Waste (DW) or Extremely Hazardous Waste (EHW) by the procedures set forth in WAC 173-303-070.

In determining which sources and pollutants to address in the plan, the Permittee shall use available sampling data, as well as knowledge of processes and materials, and available information on the relative toxicity or hazard of materials. Sources of PBTs shall be included in the analysis. The Permittee shall not be required to sample each stream analytically and may use engineering judgment to assess and quantify material inputs and outputs on a process unit basis.

Identification & Preliminary Evaluation of Pollution Prevention Opportunities:

The plan shall identify pollution prevention opportunities and provide a detailed analysis of each opportunity's technical (including safety considerations) and economic feasibility. Opportunities determined to be technically and economically feasible will be considered as known, available, and reasonable and therefore are required to be selected and scheduled for implementation. For each pollution prevention opportunity selected, the plan shall identify the process(es) or activities it affects, an estimate of the amount of pollutants reduced, and the environmental or other benefits that will be achieved.

The Permittee shall concentrate on opportunities that reduce or eliminate PBTs, priority pollutant metals, diethanolamine (DEA), and methyldiethanolamine (MDEA) to influent and upstream flows to the oily water sewer. In addition, methods to enhance biodegradation of MDEA should also be considered. Solids and hydrocarbon loadings to the oily water sewer shall also be evaluated. Storm water shall be evaluated for oil and grease and solids loading as well as toxics.

In identifying and evaluating pollution prevention opportunities, the Permittee shall consider the following:

- All reasonably expected activities and conditions, such as normal operations, maintenance, and other ancillary activities; equipment failure; improper operation; upsets, accidents, spills, leaks; and natural events such as rainfall, snowfall, etc.
- All areas of the refinery with potential to generate water pollutants including process units, raw material and product storage, handling and transfer facilities, material handling areas, maintenance areas, solid and hazardous waste storage, treatment, and disposal, and storm water systems.

The following are examples of pollution prevention strategies that may warrant evaluation:

- Improving and/or establishing new management practices and standard operating procedures addressing: increased training or supervision; improvements in inventory control, materials and waste handling, general operations, and housekeeping; preventive maintenance; and remedial measures
- Process or equipment modifications, including re-engineering processes to use less toxic input materials or to utilize by-products
- Material substitution
- Reducing material inputs

- Recycle/reuse of refinery waste, by-products, or process materials and fluids
- Application of water conservation methods, including water reuse
- Waste segregation and separation
- Alternative and/or enhanced treatment technology, including upstream treatment of pollutants

Cross-media shift of pollutants should be avoided, unless a clear net environmental benefit results and compliance with standards applicable to other media or management programs would be maintained.

Prioritization & Selection of Pollution Prevention Opportunities:

The plan shall prioritize pollution prevention opportunities. The Permittee shall provide their rationale for how the pollution prevention opportunities are prioritized. In addition to technical and economical feasibility, other factors may influence ranking of opportunities and should be included in the discussion. These factors may include capital projects planned or ongoing at the refinery that will provide a benefit to environmental media other than water, corresponding reduction in safety risks, etc. Projects that achieve the highest environmental benefit shall have greater priority.

In prioritizing and selecting pollution prevention opportunities, the Permittee shall give preference first to those that eliminate, avoid, or reduce the generation of water pollutants at the source, second to those that recycle or reuse the pollutants, and third to those that provide at-source or near-source treatment to remove pollutants or render them less toxic or harmful. In ranking opportunities, the Permittee shall also consider pollutant loading and toxicity and the potential to achieve the greatest reduction with respect to time and costs.

The Permittee is expected to establish reasonable priorities and schedules for implementation to achieve the greatest reduction in pollutant quantity and toxicity, as well as for management and fiscal necessity.

CALCULATING STORMWATER AND BALLAST WATER ALLOCATIONS

S1.A effluent limitations in the Tesoro NPDES permit are **base permit limits** that apply to process water flow – these values are fixed.

S1.C. effluent limitations in the Tesoro NPDES permits are used to calculate **incremental limits** that apply to storm water and ballast water – the S1.C. limitations are actually multipliers. The incremental limit calculated using one of the multipliers is added to the base permit limit for commingled discharges.

Storm water flow is calculated by the subtraction of an estimated dry weather flow and ballast water flow from the total flow discharged each day.

Ballast water flow is measured by gauging the ballast tank.
The ballast and storm water allocations in the Tesoro NPDES permit are based on guidelines in 40 CFR 419.12(c) and 419.22(e). The allocations for storm water are intended to apply to runoff from areas associated with industrial activity, not outlying areas such as parking lots and surrounding acreage.

Daily maximum **s**torm water and ballast water allocations shall only be used on an individual parameter basis when **mass loading in the effluent exceeds daily maximum base permit limitations** and when measurable rainfall has occurred within the timeframes established in the NPDES permit. The Tesoro NPDES permit states that during specified summer months, the permittee will only be allowed to claim the storm water allocation when it can be demonstrated that measurable rainfall has occurred at the refinery site during the previous 10 calendar days.

In calculating storm water allocations, look at the days where total effluent flow exceeds the established dry weather flow. The difference is flow due to storm water. If the storm water allocation can be claimed per the conditions of the previous paragraph, multiply the additional flow (in million gallons per day, MGD) by the appropriate allocation provided in the NPDES permit. This is an incremental permit limit in lbs per day.

Evaluating compliance with the **maximum daily permit limitation -** on a day by day basis compare the maximum discharge for a parameter to the base permit limitation plus the storm water allocation and/or ballast water allocation calculated for that parameter.

<u>Example Calculation 1.</u>

Dry weather flow: 1 MGD
Date: March 15, 1997
Parameter: Oil and Grease (O&G)
O&G maximum daily base permit limitation: 100 lbs/day
Maximum daily O& G discharge: 177 lbs/day
Total effluent flow: 2.2 MGD
Flow rate due to rainfall: 2.2 – 1 = 1.2 MGD
O&G maximum daily storm water allocation: 130 lbs/million gallons
O&G incremental limit due to storm water: 1.2 x 130 = 156 lbs/day
O&G maximum daily permit limitation for 3/15/97: 100 + 156 = 256 lbs/day

Note: Since 177 is less than 256, the permittee is in compliance with the oil and grease maximum daily permit limitation on the day evaluated. If ballast water had also been a factor on 3/15/97, an additional oil and grease allocation due to ballast water could have been calculated and added into the maximum daily permit limitation.

Evaluating compliance with the **monthly average permit limitation** - determine the days where effluent flow exceeds dry weather flow and sampling occurred. Add up the excess flow for these days and divide the result by this number of days. Multiply by the monthly average storm water allocation. -- this is the incremental storm water allocation. Compare the monthly average discharge for a parameter (total mass loading for the month divided by the days in the month) to the base permit limitation plus the storm water allocation and/or ballast water allocation calculated for that parameter.

Example Calculation 2.

Dry weather flow: 1 MGD
Month: November 1997
Parameter: Total Suspended Solids (TSS)
TSS average monthly base permit limitation: 120 lbs/day
Average monthly TSS discharge: 216 lbs/day
During the 5 sampling days the total storm water flow excess was: 2.5 million gallons
TSS average monthly storm water allocation: 180 lbs/million gallons
TSS incremental limit due to storm water: 2.5/ 5 x 180 = 90 lbs/day
TSS average monthly permit limitation for November 1997: 120 + 90 = 210 lbs/day

Note: Since 216 is greater than 210, the TSS average monthly permit limit is exceeded.

If ballast water had also been a factor in Example Calculation 2.,the average monthly permit limit would not have been exceeded.

Ballast water flow for November 1997 (1 day): 50,000 gallons or 0.05 million gallons
TSS average monthly ballast water allocation: 170 lbs/million gallons
TSS incremental limit due to ballast water: 0.05/ 1 x 170 = 8.5 lbs/day
TSS average monthly permit limitation for November 1997: 120 + 90 + 8.5 = 218.5 lbs/day